

**WATER QUALITY PROTECTION DIVISION &
GULF OF MEXICO PROGRAM OFFICE
ALL BRANCH WEEKLY ACTIVITY REPORT - WEEK ENDING 9/12/14**

WATER QUALITY PROTECTION DIVISION

ASSISTANCE PROGRAMS BRANCH

BORDER ENVIRONMENT COOPERATION COMMISSION AND NORTH AMERICAN DEVELOPMENT BANK QUARTERLY PROJECT MEETING: Assistance Programs Branch staff met on September 9-10, 2014 with Border Environment Cooperation Commission, North American Development Bank, Mexico's National Water Commission and State of Chihuahua personnel at the Region 6 Border office in El Paso. The quarterly meeting was part of the ongoing project development, oversight and certified projects review. The meeting discussion involved the current status of projects approved for development during the FY09/10, FY11/12 and FY13/14 prioritization and currently receiving Project Development Assistance Program funding as well as future certification of these projects. In addition, current projects in construction and project close outs were discussed. The participants visited project sponsors in New Mexico and the El Paso County area on September 11-12, 2014. **Gilbert Tellez, (915) 555-5223; Salvador Gandara, 665-3194**

INTER-AGENCY AGREEMENTS AWARDED TO INDIAN HEALTH SERVICE FOR FY 2014 ALBUQUERQUE AND OKLAHOMA DRINKING WATER TRIBAL SET-ASIDE (DWTSA) PROJECTS: The Assistance Programs Branch, and the SRF and Projects Section presented Inter-Agency Agreements (IAs) to the Albuquerque and Oklahoma Indian Health Service (IHS) offices. EPA Region 6 has completed eight IA requests with IHS for \$1,733,000 of the allotted \$1,763,000 toward the construction of various water projects. Seven Albuquerque IHS projects with DWTSA funds totaling \$1,513,000 have been selected for awarding. The selected projects are the Pueblo of Santo Domingo (\$156,000), the Pueblo of San Ildefonso (\$100,000), the Pueblo of Acoma (\$800,000), the Pueblo of Mescalero-Apache (\$250,000), the Pueblo of San Felipe (\$68,000), the Pueblo of Pojoaque (\$97,000), and the Pueblo of Santa Clara (\$42,000). These projects will benefit 3,088 households. One Oklahoma IHS project for \$220,000 was selected for the Kickapoo Traditional Tribe of Texas and will benefit 54 households. **Curry Jones, 665-6793; Maurice Rawls, 665-8049; Dena Hurst, 665-7283; Kim Ngo, 665-7158**

TRAINING FOR NEW CLEAN WATER SRF AMENDMENTS DRAFT GUIDANCE IN KANSAS CITY FOR REGIONS AND STATES: The new Water Resource Reform and Development Act of 2014 (WRRDA) describes several amendments to the Clean Water Act that have a large impact on the CWSRF program. EPA HQ is having 4 trainings across the U.S. on the new draft guidance that has been issued by HQ to interpret the amendments. All 50 state SRF programs and all ten EPA regions are invited to collaborate on changes to the SRF programs as result of these acts and the corresponding guidance's interpretation. General topics include additional eligibilities under the CWSRF program, changes to additional subsidy requirements, and required affordability criteria. Ashley Howard (CWSRF Coordinator) will be the Water Quality Protection Division's representative. **Maurice Rawls, 665-7049; Ashley Howard, 665-7597**

ECOSYSTEMS BRANCH

ADVANCEMENT OF NEW MEXICO'S WETLANDS PROGRAM: The New Mexico Environment Department, Surface Water Quality Bureau, Wetlands Program has successfully completed the last phase of a long running project to develop a rapid assessment protocol for assessing wetland condition. This methodology, known as the New Mexico Rapid Assessment Method (NMRAM), focused on an area of Montane Riverine Wetlands situated in north central New Mexico on tributaries of the Upper Rio Grande and Rio Chama. The state has begun collecting data in other parts of the state to expand the NMRAM's applicability across other wetland types. In addition, this project included the development of a statewide data base called the New Mexico Wetlands Rapid Assessment Database. Ultimately data collected from different trained user groups will be entered into the database to begin to establish a statewide wetland condition baseline from which status and trends can be determined. The completion of this project and the ongoing expansion of the NMRAM represent a significant step forward by New Mexico in developing its wetlands protection program capabilities. **Richard Prather, 665-8333.**

ATTOYAC BAYOU WATERSHED PROTECTION PLAN: EPA Region 6 completed review and awarded conditional acceptance of the Texas Attoyac Bayou Watershed Protection Plan (WPP) on September 4, 2014. These WPPs are required under the Clean Water Act Section 319 Nonpoint Source (NPS) Program. EPA acceptance of these WPPs opens the door for NPS funds to be awarded to states for study and implementation of Best Management Practices (BMPs) to control NPS pollution. The Attoyac Bayou WPP was developed by the Texas Water Resources Institute, a part of the TX A&M Agrilife program, under contract with the TX State Soil and Water Conservation Board. Attoyac Bayou is located in East TX, about 70 miles south of Longview, and has a 550 square mile watershed. The bayou is impaired by bacteria, and the WPP addresses implementation of BMPs to reduce bacterial impairment. **Mike Bira, 665-6668**

NATIONAL RIVERS AND STREAMS ASSESSMENT REFERENCE SITE SAMPLING COMPLETED AT PAULS VALLEY, OKLAHOMA. Staff from the Monitoring and Assessment Section recently completed a National Rivers and Streams Assessment (NRSA) sampling event at Pauls Valley, Oklahoma. Monitoring staff collected fish, macroinvertebrates, and water samples according to national NRSA sampling protocols. Additionally, a complete habitat assessment was completed along the selected stream reach. As a reference site, this stream will be used for comparison to assess the condition of other similar streams within the same ecoregion. Monitoring and Assessment staff have now completed all reference site sampling for the 2013/2014 National Rivers and Streams Survey. **Mark Stead, 665-2271; Robert Cook, 665-7141; Laura Hunt, 665-6536; Mike Schaub, 665-7314**

CWPPRA OUTREACH EVENT: Pulitzer Prize-winning journalist Bob Marshall requested the assistance of the CWPPRA Outreach Committee in staging one of the nine field trips conducted as part of the Society of Environmental Journalists' annual conference in New Orleans. On September 4, 2014, CWPPRA team members and project managers were on hand for the day-long immersion into the science and engineering of rebuilding barrier islands and restoring coastal marshes. About 60 journalists and guests from all parts of the country visited two CWPPRA restoration projects in Plaquemines Parish. The Pelican Island and Lake Hermitage projects were visited via a fleet of 20 boats provided by the Parish and numerous other friends of the program. A lunch session at the Woodlawn Plantation was used to allow the journalists an opportunity to interview coastal restoration experts from all of the state and federal member agencies of the CWPPRA team and some of these experts gave talks during the bus ride to the project area. The

journalists were also provided a wealth of additional information in print and in digital format concerning the coastal land loss issues facing south Louisiana, providing the journalists an abundance of valuable information to use in future news articles. Bob Marshall summed up the trip by saying about the field trip participants, “Many were ‘blown away’ when they learned about what has happened to our coast, and the scope of the challenge and fight going on to avert disaster. ...That’s why I truly believe events like yesterday are important to winning that fight.” **Paul Kaspar, 665-7459; Barbara Keeler, 665-6698**

OKLAHOMA NONPOINT SOURCE PROGRAM MANAGEMENT PROGRAM PLAN

REVIEW: EPA completed review and commented on the first draft of the Oklahoma Nonpoint Source (NPS) Program Management Program Plan (NPSMPP). This document was developed by the Oklahoma Conservation Commission (OCC), the state- designated agency to manage the state NPS Program. These NPSMPPs are required by the EPA NPS Program guidance, and must be amended/approved every five years. They are the cornerstone of the state programs, and describe how the program is planned and implemented toward reduction of NPS pollution across each state. We expect the OCC to incorporate comments and submit the final version of the NPSMPP for EPA approval by September 30, 2014. **Mike Bira, 665-6668**

OKLAHOMA WATER QUALITY STANDARDS: The Oklahoma Water Resources Board (OWRB) is currently planning a 2014-2015 interim revision of Oklahoma’s Water Quality Standards (WQS). On October 8, 2014, OWRB will hold an informal public meeting in Oklahoma City to discuss potential revisions to Oklahoma’s dissolved oxygen (DO) criteria provision, site-specific copper and zinc aquatic life criteria for the City of Broken Bow’s receiving waters, and additions to Appendix H (relating to groundwater beneficial uses). Draft wetland-specific WQS will be discussed at a subsequent OWRB public meeting to be held on October 28, 2014. Staff from the Watershed Management Section have been coordinating closely with other Water Division program staff on review of the preliminary draft DO criteria revisions and wetland WQS. **Melinda McCoy, 665-8055; Russell Nelson, 665-6646; Richard Prather, 665-8333; Tami Sundquist, 665-8360; Mike Schaub, 665-7314; Taimur Shaikh, 665-7181**

PLANNING & ANALYSIS BRANCH

FOUR NEW REGION 6 GREEN INFRASTRUCTURE STORIES CREATED: Water Information and Analysis Team staff have completed layout for four new green infrastructure factsheets; two from Louisiana, one from Texas, and one from New Mexico. The factsheets, which will next be published to the internet, are meant to recognize and promote the use of green infrastructure practices in Region 6 and beyond. **John Stadelman, 665-7394; Patricia A. Taylor, 665-6403**

PROPOSED LOWER BOIS D’ARC CREEK RESERVOIR, SEPTEMBER 9, 2014: A member of the Surface Water Center worked with Jeanene Peckham of Wetlands to review available imagery of the proposed location of Lower Bois D’Arc Creek in Fannin County, Texas. Imagery was reviewed to determine previous impacts from the channelization of Bois D’Arc Creek and the areas that would be impacted by the proposed reservoir. There was a meeting on Tuesday to discuss mitigation requirements and further assessment required, if any, before permitting the construction of the reservoir. The Surface Water Center will support the continued evaluation of impacts of the proposed reservoir. **Bob Kirkland, 665-6798**

FILLABLE PDFS FOR MS4 NOTICE OF INTENT (NOI) AND ANNUAL REPORT,

SEPTEMBER 10, 2014: A member of the Surface Water Center has worked with Nelly Smith of the Permits and Technical Assistance Section and finalized a fillable PDF form for the MS4 NOI and Annual Report. The Annual Report form will be posted to the web and a finalized version of the NOI form will be provided to permittees for initial use and further review. When the forms are completed by the permittee and submitted back to EPA, the form data will be electronically transferred to an MS Access database. The database will be used to track permit information and status. Further research is being done on electronic signatures, which permittees can use to sign and validate the forms. **Bob Kirkland, 665-6798; Nelly Smith, 665-7109**

CRITICAL CONDITIONS FOR REGENCY FIELD SERVICES – FASHING GAS PLANT

SEPTEMBER 8, 2014: The Surface Water Center worked with geospatial data to determine the critical conditions and flows for the Regency Field Services – Fashing Gas Plant oil and gas NPDES Permit. Outfall 001 discharges into an unnamed tributary of Water Creek, which flows into Lipan Creek and then at the Atascosa River Texas Commission on Environmental Quality segment 2107. The creeks were determined to be intermittent from the location of discharge until the waters entered the Atascosa River. The critical flows, 7Q2 and Harmonic Mean, were calculated for Outfall 001 interpolating USGS gage information from an area with similar annual rainfall. The critical conditions and flow information will be used to define Permit requirements for the facility in question. **Bob Kirkland, 665-6798**

CRITICAL FLOW DATA FOR TEXAS, SEPTEMBER 4, 2014: The Surface Water Center has completed an update of 7Q2s, Harmonic Means and Contributing Areas for all U.S.

Geological Survey/ Texas Commission on Environmental Quality and International Boundary and Water Commission stream gages in Texas. These critical flows in Texas are used for Oil and Gas NPDES permitting in Texas are an important part of the permitting process. The Surface Water Center plans to continue this update process in the future as time permits and will provide other low flow calculations as required. **Bob Kirkland, 665-6798**

MAPPING OF TRI OFF-SITE TRANSFER OF TOXIC CHEMICALS: A member of the Surface Water Center is working, using Geographic Information System (GIS) technology, with OEI on a Skills Market Place project to make available to the public maps showing TRI off-site transfers of toxic chemicals.

Under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), regulated facilities must submit annual reports on the quantities of toxic chemicals they release to the environment or otherwise manage as waste to EPA's Toxics Release Inventory (TRI) Program, as well as state and tribal governments. Each year, the TRI Program collects onsite and off-site release and transfer quantities, as well as other waste management quantities of over 650 toxic chemicals and chemical categories from more than 20,000 industrial and federal facilities. The TRI Program is interested in making the off-site transfer quantity information available utilizing GIS mapping tools. Mapping will show the flow of transfers from one sending facility to one receiving facility or to multiple sending/receiving facilities with types of chemicals, geography of facilities, waste management type, etc. **Angel Kosfiszer, 665-2187**

NPDES PERMITS AND TMDL BRANCH

EPA REGION 6 APPROVES 14 TOTAL MAXIMUM DAILY LOADS (TMDL) SUBMITTED BY THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ): On September 8, 2014, EPA Region 6 approved of the final total maximum daily load (TMDL) document titled “2014 Bacterial and Turbidity Total Maximum Daily Loads for the Oklahoma Lower Red River – Little River Basin Study Area” which includes 14 TMDLs addressing bacteria and suspended solids. The total number of approved Oklahoma TMDLs in FY2014 is currently 34. **Taimur Shaikh, 665-7181**

PRETREATMENT PROGRAM AUDIT & MUNICIPAL POLLUTION PREVENTION ASSESSMENT FOR THE CITY OF LAS CRUCES, NM: A member of the Permits Oversight Section of the NPDES Permits and TMDL Branch, will lead a Pretreatment Program Audit/Municipal Pollution Prevention Assessment (MPPA) of the City of Las Cruces, New Mexico Pretreatment Program on September 16-18, 2014. The Audit/MPPA will focus on Pollution Prevention activities and Pretreatment Program implementation. **Rudy Molina, 665-6731**

INTERIM OBJECTION LETTERS ISSUED TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. An Interim Objection Letter was issued to the Texas Commission on Environmental Quality on September 5, 2014, for the Sunbelt Fresh Water Supply District - TX0071382 draft permit, due to a pH limit which is inconsistent with the Texas Water Quality Standards. The letter is requesting information to show why the proposed pH limit is appropriate. **Rudy Molina, 655-6731**

SMALL VESSEL GENERAL PERMIT FINAL: The Small Vessel General Permit for discharges incidental to the normal operations of vessels less than 79 feet (sVGP) was announced in the *Federal Register* on September 10, 2014. The sVGP will become effective December 19, 2014. **Jenelle Hill, 665-9737**

NEW MEXICO PREPARES FINAL TOTAL MAXIMUM DAILY LOAD DOCUMENTS FOR EPA REVIEW AND APPROVAL: The New Mexico Environment Department’s Surface Water Quality Bureau (SWQB) presented the final draft *Total Maximum Daily Load (TMDL) for the Upper Gila, San Francisco, and Mimbres Watersheds* to the Water Quality Control Commission (WQCC) on September 9, 2014. The WQCC approved the document and the SWQB expected to submit it to EPA by September 12, 2014, for review and approval. **Katrina Higgins-Coltrain, 665-8143**

CONFERENCE CALL WITH LOUISIANA TO DISCUSS TOTAL MAXIMUM DAILY LOAD (TMDL): On September 10th the TMDL Section held a call with the Louisiana Department of Environmental Quality and discussed the Lower Grand/Belle Watershed Biochemical Oxygen-Demanding Substances and Nutrients TMDL. The public comment period closed on September 8, 2014. Louisiana will be submitting to EPA for final approval in September. **Monica Burrell, 665-8143**

LAKE WISTER MODELING PROJECT: On September 9, 2014, EPA Region 6 staff participated in a conference call with Thad Scott of the University of Arkansas and Steve Patterson of Bio x Design who were representing the Poteau Valley Improvement Authority. The discussion

focused primarily on the use of a hydraulic/water quality model set (ELCOM/CAEDYM) and its applicability and approvability with regards to possible nutrient TMDL generation regarding Lake Wister in Oklahoma. **Taimur Shaikh, 665-7181, Melinda McCoy, 665-8055 Mike Bira, 665-6668, Forrest John, 665-8368, Phil Crocker, 665-6644**

EPA STAFF HAVE REVIEWED 2 CAFO PERMITS WITH MINIMAL COMMENTS FOR ISSUANCE: On September 9, 2014, EPA found Texas Commission on Environmental Quality (TCEQ) Concentrated Animal Feeding Operation permits for Blue Jay Dairy and Uphill Dairy sufficient for issuance with minimal comments requesting that the TCEQ update its technical standards. **Paul Juarez, 665-7247**

SOURCE WATER PROTECTION BRANCH

R6 OFFERS COMMENTS ON PROPOSED TEXAS UIC REGULATIONS WITH RESPECT TO INDUCED SEISMICITY: In response to a commitment made at an August 18th meeting between Bill Honker and Milton Rister, Executive Director of the Railroad Commission of Texas (RRC), the Ground Water/UIC Section submitted to the RRC comments to the RRC's proposed changes to their UIC rules. The changes are designed to allow the Commission to respond to known or suspected induced seismicity events related to Class II disposal activities. While a major step forward for the RRC, the proposed rule could be improved by more clearly defining pressure front boundaries and the area influenced by the injection of fluids. The Region 6 comments propose several alternatives to deal with these issues. **Michael Overbay, 665-6482; Ken Johnson, 665-8473; Nancy Dorsey 665-2294**

SOURCE WATER PROTECTION BRANCH PROVIDES INPUT FOR PERGAN ENFORCEMENT LETTER: 6WQ-S provided comments and edits on a letter that R6 Enforcement and Regional Counsel is preparing for John Blevins' signature. This letter will be sent to Pergan Marshall, LLC and is related to their Resource Conservation and Recovery Act (RCRA) and Safe Drinking Water Act (SDWA) violations. The SDWA violations are related to the TCEQ delegated Underground Injection Control Program and the RCRA violations are related to the R6 injection well no migration petition. This letter will also include RCRA and SDWA information requests and 6WQ-S has also provided input on these requests. **Brian Graves, 665-7193**

11th ANNUAL EPA DRINKING WATER WORKSHOP IN CINCINNATI, OH: Two members of the Drinking Water section attended a small systems technical workshop in Cincinnati, Ohio September 9-11, 2014. The purpose of the workshop was to provide in-depth training and information on various solutions and strategies for handling small systems problems and compliance challenges. Two of Region 6 States provided presentations at the national event including Louisiana's current status of the naegleria fowleri investigative sampling and Oklahoma's stance on "new" steps taken to increase water quantity. This work improves the Region's ability to ensure safe drinking water and public health protection. **Amy Camacho, 665-7175; Andy Waite, 665-7332**

SUSTAINABLE MANAGEMENT OF RURAL AND SMALL SYSTEMS – WORKSHOP: Two members of the Water Quality Protection Division traveled on Thursday, September 11, to Terrell, Texas, to attend a one-day Sustainable Management of Rural and Small Systems workshop, sponsored by Texas Rural Water Association. These workshops are one of many that

will be offered within Region 6. The workshops will assist rural and small systems by addressing a full range of challenges and improve the management of their operations and infrastructure. **Omar T. Martinez, 665-8485; David Reazin, 665-7501**

R6 PROVIDES ASSISTANCE TO R3 FOR SEISMICITY CONCERNS WITH A CLASS II UIC PERMIT: Region 3 UIC staff requested assistance in interpreting a seismic section connected with a disposal permit application. Ground Water/UIC Section staff reviewed available information, offered an interpretation of the seismic section and recommended permit contingency plans in the (unlikely) event of seismicity occurring after disposal operations startup. **Nancy Dorsey, 665-2294**

GULF OF MEXICO PROGRAM OFFICE

LOUISIANA RESTORE PUBLIC MEETING: Jane Watson attended a public meeting to gather public input on priorities and projects the State of Louisiana might sponsor for funding with RESTORE Act dollars in compensation for damage from the 2010 Deepwater Horizon oil spill, hosted by the state's Coastal Protection and Restoration Authority (CPRA) at University of New Orleans on September 4, 2014. CPRA received comments that state permitting of the RAM coal export terminal, a facility proposed in the area of a large restoration project in Louisiana's mid-Barataria Basin, conflicted with coastal restoration planning. Commenters also noted that the federal agencies on the RESTORE Council did not have a central repository for the public to advocate for projects and programs to they might seek or support. CPRA asked for any input on potential projects by September 30, 2014. **Jane Watson 228-688-1204**

NATIONAL ACADEMY OF SCIENCES GULF OF MEXICO MONITORING

WORKSHOP: Jane Watson attended a by-invitation workshop for scientists from federal and state agencies, academia, and environmental advocacy groups convened by the National Academy of Sciences (NAS) in New Orleans, Louisiana, September 3-4. The workshop objective was to better inform the Academy of environmental monitoring needs in the Gulf of Mexico, and identify opportunities for monitoring partnerships and innovations. The NAS will receive \$500 million over 5 years as part of the RESTORE Act for environmental monitoring and research and development in the Gulf of Mexico, and may use proceedings from a series of workshops to guide expenditures. **Jane Watson 228-688-1204**

NOAA / EPA: The National Oceanic and Atmospheric Administration (NOAA) shared with the EPA that a key milestone had been reached for binational work in the Gulf of Mexico geographic water body. Specifically, NOAA and the EPA Gulf of Mexico Program have worked together for 5+ years in support of Mexico developing a Gulf of Mexico Large Marine Ecosystem Strategic Action Plan (GoM LME SAP) to complement the existing Gulf of Mexico Alliance Action Plan. The technical work supports a binational effort designed to address the following priority transboundary challenges:

- 1) Improve Water Quality,
- 2) Avoid Depletion and Recover Depleted Living Marine Resources,
- 3) Conserve Coastal and Marine Ecosystems,
- 4) Mitigate and Adapt to Climate Change and Sea Level Rise,
- 5) Improve Science Education and Outreach, and
- 6) Cross-Cutting Issues.

The United National Industrial Development Organization (UNIDO) has provided support and approval for funding to continue the development and implementation of the Mexican GoM Strategic Action Plan. The funding is through the Global Environment Facility and was approved at \$12.9 Million U. S. dollars. The first step is the issuance a \$300,000 allotment to prepare a detailed, 5-year Plan. The Plan is due within 15 months. NOAA and EPA representatives will continue to work hand-in-hand with Mexican counterparts to reach this deadline and, ultimately, toward the implementation. When initiated, the entire Gulf of Mexico region will truly be working together to protect/enhance the environment, improve human health and support coastal community resilience.

THE ALLIANCE COORDINATING COMMITTEE (ACT) / GOMA KENNER LA – SEPTEMBER 3-4: ACT is one of the Governors’ Gulf of Mexico Alliance (GOMA or Alliance) teams. The ACT is composed of the State Leads and federal co-facilitators, along with several “team-neutral” members. [Note: Non-government organizations are not currently eligible to be ACT members.] At present, the Alliance is nearing the completion of Action Plan AP II, 2009 – 2014 (AP II). This AP II is the strategic plan for all six priority issue teams: water quality, habitat restoration/conservation, coastal community resilience, environmental education, nutrient reduction and ecosystem integration/assessment.

Specifically, the ACT Meeting addressed the following:

- Reviewed “2015 Blueprint” input from GOMA members and regional partners;
- Identified and discussed “new issues” that may be/are important for the Gulf of Mexico and appropriate for GOMA to tackle;
- Shared suggestions about if/how GOMA priority issue team structure needs to change to accommodate new issues and drivers in the Gulf region; and
- Identified next steps for sharing recommendations for change that will be reflected in the new blueprint with the AMT. Detailed information and the 2015 Blueprint will be shared once the documents are developed/released for review.

NUTRIENT SENSOR CHALLENGE WORKSHOP IN WASHINGTON DC – SEPTEMBER 17-18: EPA Staff participated in and represented EPA at the event hosted at American University in Washington, D.C. This project is supported by funds from NOAA and EPA and is being coordinated with the interagency Challenging Nutrients Coalition and Partnership in Technology Innovation and the Environment. Excessive amounts of vital nutrients (mainly nitrogen and phosphorus) entering the waterways cause serious environmental, social and economic problems and thus require careful monitoring and management. Current nutrient sensor/analyzer technology has made significant advancements in recent years but the high cost and effort required to purchase, operate and maintain such sensors is often prohibitive for managers, researchers and modelers interesting in measuring nutrients in water. The central goal of the Workshop is to continue the dialogue and partnership efforts between users and developers/providers of in-situ nutrient sensors.